

At the morning session Wing Commander Brock Brown, R.C.A.F., Commanding Officer, Institute of Aviation Medicine, Toronto, outlined the newer problems and recent progress in Aviation Medicine. His paper had particular application to the physiological stresses imposed on the body by high speed high altitude flight. All factors such as acceleration, deceleration, anoxia, etc., become increasingly greater problems at 1,000 miles per hour. At this speed one travels 1,466 feet per second; consequently, the reaction time of the pilot is of great importance.

Surgeon Captain A. McCallum, Medical Director General of the Royal Canadian Navy, presented a paper which reviewed the statistics so frequently publicized giving an unfavourable impression of the general state of health of Canada's population. He pointed out that many cases of rejection of members of the fighting forces had no relation to health or longevity as such. Reference was made to the lack of doctors trained in appraisal of a new recruit, with a consequent tendency to give the individual the benefit of a borderline decision rather than to accept an element of risk in favour of the country's needs for large numbers in a fighting force. His conclusion was that, generally speaking, the youth of Canada is physically sound. He closed his remarks with the question, "What does it profit a nation to have a physically perfect armed force, but only in sufficient numbers as could lose a war?"

Lieut.-Col. William Feasby, R.C.A.M.C. (Ret'd.), outlined the progress being made in recording the official history of the Medical Services of the Armed Forces in World War II. Two volumes will ultimately be published, one bearing on the organization and growth of the three Medical Services and the other volume dealing with the clinical aspects encountered during the war. At least one more year will elapse before these volumes are available.

At the afternoon session a paper was read by Surgeon Lieutenant Commander J. M. Parker, R.C.N.(R.) (Ret'd.), on certain aspects of Chemical Warfare as experienced during World War I and II. The paper was illustrated by coloured lantern slides to show the distribution and the nature of the lesions incurred.

Major J. S. Hitsman, R.C.A.M.C., attached to the Paratroop Training Centre at Rivers, Manitoba, presented a paper illustrated by slides and motion pictures demonstrating the various steps taken in such training, both on the ground and in the air. He also pointed out the types and relative prevalence of the injuries which might be sustained during such training.

A discussion period followed each paper, in which a large number took part. Many pertinent questions were asked, which were adequately answered by the various speakers.

## SPECIAL CORRESPONDENCE

### The London Letter

(From our own correspondent)

#### B.M.A. IN CONFERENCE

Meeting at Harrogate this year in the midst of a sweltering heat wave which made the golf course appear much more attractive than the conference room, the delegates to the annual meeting of the British Medical Association found their attention centred on two major problems. The more important of these raised a vital matter of principle so far as the National Health Service is concerned. This is the omission from the National Health Service (Amendment) Bill now before Parliament, of a clause compelling the Minister of Labour to refer to arbitration disputes concerning remuneration and conditions of service of individuals employed in the Service. Under the terms of the Bill at present the Minister has

powers to refer such disputes to arbitration, but is not compelled to do so. This is obviously a state of affairs which no profession can tolerate, as it means that in the event of a dispute concerning remuneration of conditions of service, the "employers", i.e., the Ministry of Health, would be able to enforce their views upon the "employees", i.e., the doctors, without the latter having any right of appeal to an independent court of arbitrators. The B.M.A. representatives at Harrogate nobly sacrificing the joys of the golf course and of the lovely Yorkshire dales for the utter discomfort of English halls characteristically designed to reduce the circulation of air to a minimum, made it abundantly clear that here was a matter of principle which they were going to resist, even to the extent of resigning en masse from the Service, if necessary.

The other major problem at this year's meetings was the difficulty that has arisen over the decisions as to who shall, and who shall not, be specialists in the new Service. The committees which have been given the invidious task of combing through the staffs of the hospitals of the country and deciding which of their staffs shall be nominated as specialists, have been primarily handicapped by the need for speed. This is but another example of the baneful effect upon the health services of the country, produced by the illogical and importunate speed with which the present Government insisted upon introducing the scheme now reaching, rather unsteadily, the end of its first year of existence.

#### ACCIDENTS IN THE HOME

A recent issue of the *Monthly Bulletin* of the Ministry of Health has re-focused attention on a problem which has never received adequate attention in this country, namely the alarming number of accidents in the home. It is shown, for instance, that more children die from accidents in their own homes than from any single infectious disease, and it is estimated that 17 persons are killed every day by such accidents. This probably means that ten times as many sustain injuries as require medical attention. One of the major causes of such accidents are unguarded fires, and striking confirmation of the official figures is provided by the experience of the Birmingham Accident Hospital. During a three and a half year period (1945-48) this hospital admitted 70 people burned in their homes by contact with electric or gas fires, of whom 13 died of their injuries, and 110 people were burned by contact with coal fires, of whom 15 died. If these figures are taken as a representative sample, it is estimated that in the whole country at least 1,400 persons are burned in this way annually, and of these at least 250 die of their injuries. That the seriousness of the problem is not appreciated is suggested by Dr. Leonard Colebrook's report that at a recent housing exhibition he counted 28 different types of electric and gas fires that were not provided with an adequate guard, and that there were only eight safe types. The other dangerous feature at the moment is the highly inflammable nature of the garments worn by women and children. The more general adoption of nylon materials would remove this particular danger. Dr. Colebrook states that in contact with a fire such nylon materials as he has been able to test melt without any visible flame.

#### ART AND HEALING

It is now eleven years since Mr. Adrian Hill, the artist, following his experiences as a patient of one of the leading sanatoria in the country, introduced the concept of the therapeutic value of art in the treatment of tuberculous patients. There are now full-time art therapists at a few hospitals and sanatoria, whilst in others weekly art sessions are held. The South-Western Metropolitan Regional Hospital Board has now set up an art therapy committee to review the work being done in this connection and to encourage

its development. Much work has also been done by the National Association for the Prevention of Tuberculosis which "believes in the value of art not only as a means of individual expression but as one definite source of mental and bodily healing". During the last three years this Association has organized regular art competitions in sanatoria, and these competitions now function in 120 sanatoria. In addition, a panel of twelve artists has paid 400 visits to sanatoria during this period. In these competitions an average of 300 paintings are received regularly. It is refreshing in these days of chemotherapy and radiotherapy to be reminded that the art of medicine is still wise enough to realize its integral relationship with the things of the mind and of the spirit.

#### A MEDICAL GOVERNOR

There has been widespread pleasure at the official announcement of the appointment of Sir Alexander Hood as Governor and Commander-in-Chief of Bermuda. One of the greatest Director-Generals in the annals of the Army Medical Service, he was clearly marked out for further promotion. It is not often that a medical man has been appointed Governor of a Colony, but Sir Alexander Hood's outstanding qualities as an administrator, his gift for handling men and his capacity for work are the very qualities that are most required at the present moment in the Governor of a Colony. He carries with him the best wishes of all his former colleagues and subordinates in the R.A.M.C. as well as those of all his many other friends in the profession to which he has brought such lustre.

WILLIAM A. R. THOMSON

London, July, 1949.

## ABSTRACTS FROM CURRENT LITERATURE

### Medicine

**Management of Lower Nephron Nephrosis.** Hoffman, W. S. and Marshall, D.: *Arch. Int. Med.*, **83**: 249, 1949.

Lower nephron nephrosis, now recognized as a distinct entity, means a severe disturbance of function of the lower cortex because of degeneration and necrosis of the cells of the ascending loop of Henle and distal convoluted tubules along with interstitial oedema and infiltration of cells. This disturbance is most often seen after crushing injuries, in transfusion reactions, or resulting from sulfonamide intoxication, and various other shock-producing accidents. The problem created is oliguria progressing to anuria with death from uræmia imminent.

The authors feel that intervention, decapsulation, uretero-pelvic lavage, etc., have no physiological support. Death, when it occurs is from uræmia. The patients usually live for 7 to 10 days. In those who survive, diuresis begins on the 5th day. The authors feel that once anuria has developed, there is no known treatment that produces diuresis until some healing takes place in the lower nephron, because the damage to these tissues is the real cause of anuria.

The authors in their treatment, instead of trying to force a damaged kidney to secrete, endeavour to keep the patient alive until there is sufficient recovery in the tubules to allow effectual diuresis. Apparently there is improvement in kidney function about the 10th day, but uræmia has usually been fatal by that time. Treatment is aimed at hastening the recovery of the kidney tissues while postponing the onset of uræmia. The answer is restoration and maintenance of a good state of nutrition. This includes water soluble vitamins and blood transfusions, also careful induction of oedema dilutes the toxic products and adds to the alkali reserve.

The dangers of this can be minimized by proper precautions. (Edema is usually already present and so there is a lack of chloride and sodium. Several litres of intravenous normal saline and 6th molar sodium lactate are used. This usually starts diuresis. Meanwhile, blood transfusions are continued. Sodium bicarbonate (i.v.) was used to combat acidosis. A good soft diet was allowed. Vitamins B and C as well as calcium were given in large quantities. On succeeding days this fluid (i.v.) was continued, the quantity regulated by the laboratory findings. Hypertonic saline appeared to relieve threatening accumulations of fluids and make the patient more comfortable. Patients were encouraged to eat normally, which meant they could get along without intravenous treatment. If unable to take food by mouth, amino acids were given i.v. Penicillin was used routinely. Once the urinary output reached 500 c.c. per day, all fluid was stopped, patient propped up and the legs allowed to hang over the edge of the bed part of the time. Digitalis and aminophylline were used.

Six cases are presented where the patients were treated in this way, two were blood transfusion reactions, two reactions from drugs of the sulfa group, one shock from severe hæmorrhage and one poisoning with carbon tetrachloride causing acute hepatitis as well as lower nephron nephrosis. Five recovered and one died, the fatal case one of blood transfusion reaction. P. M. MACDONNELL

**A Re-examination of the Structure of the Mammalian Liver: I. Parenchymal Architecture.** Elias, H.: *Am. J. Anat.*, **84**: 311, 1949.

The term "cord" (or "trabecula") for a subdivision of liver parenchyma has always been confusing to medical students and others for they have never been able to see such a structure isolated in sections. Elias would disregard this erroneous conception of the older histologists and would substitute for it such terms as "sheet", "plate" or "lamina". These sheets are one cell thick, fenestrated and much branched. They are curved and wall in the sinusoids, rather than being enclosed by these, as in the older misconception. Coursing in these irregular laminæ is the much-branched network of bile canaliculi. Diagrams make this idea clear. The study was made in three dimensions on livers of man, cat, rabbit and horse. C. C. MACKLIN

**Mitochondrial Arrangement in Alveolar Epicytes and Foam Cells of Mouse Lungs, Particularly as Induced by the Vacuoloids.** Macklin, C. C.: *The Biol. Bull.*, **96**: 178, 1949.

In alveolar epicytes (septal cells) and alveolar foam cells of albino mouse lungs the most characteristic feature of mitochondria is their disposition around the vacuoloids to outline hollow spheres or, in section, circles. This gives these cells in fuchsin-stained sections a lace-like appearance. Mitochondria are never found within the vacuoloids.

There is a numerical preponderance of coccoid and ovoid forms. Under the cell membrane, rods and smaller granules often form an imperfect layer in which two parallel rows may sometimes be seen. Another such layer, usually of shorter forms, may overlie the nucleus. In epicytes a curious formation of parallel rods in the form of a hollow cylinder often marks the shaft. Noteworthy in these cells, too, are the angular piles of mitochondria, predominantly of rods, which suggest the supports of an Indian wigwam. These point outward at the lateral margin of the larger or head end. In the greater foam cells the mitochondria are less conspicuous than in those of smaller size, or in well developed epicytes. C.C.M.

**Rehabilitation of the Hemiplegic Patient.** Lowman, E. W.: *J. Am. M. Ass.*, **137**: 431, 1948.

This is a most interesting and timely article. All too often patients are committed to a bed or wheel chair life following a hemiplegia, when under adequate training and supervision they could again become